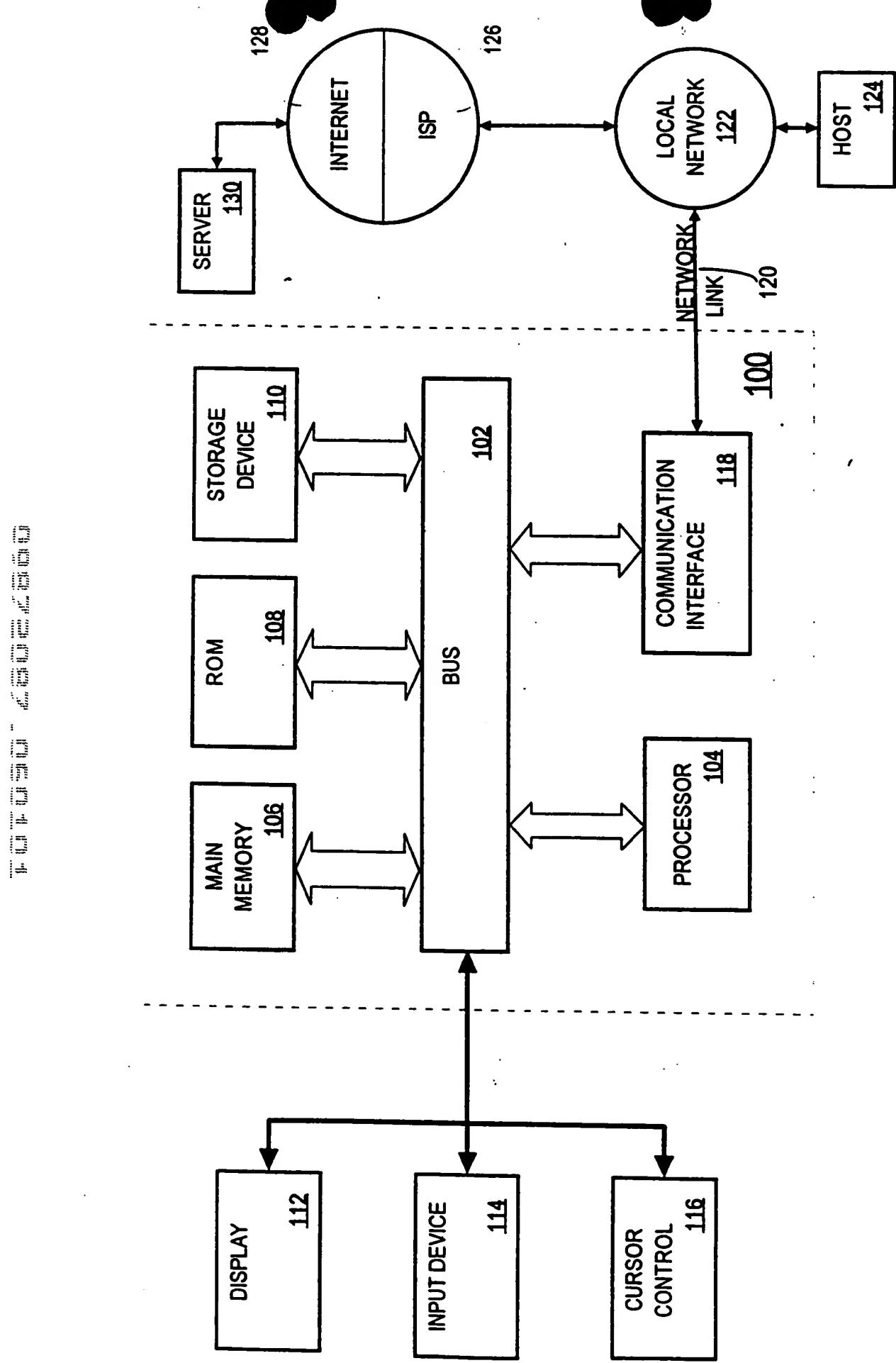


**FIG. 1**



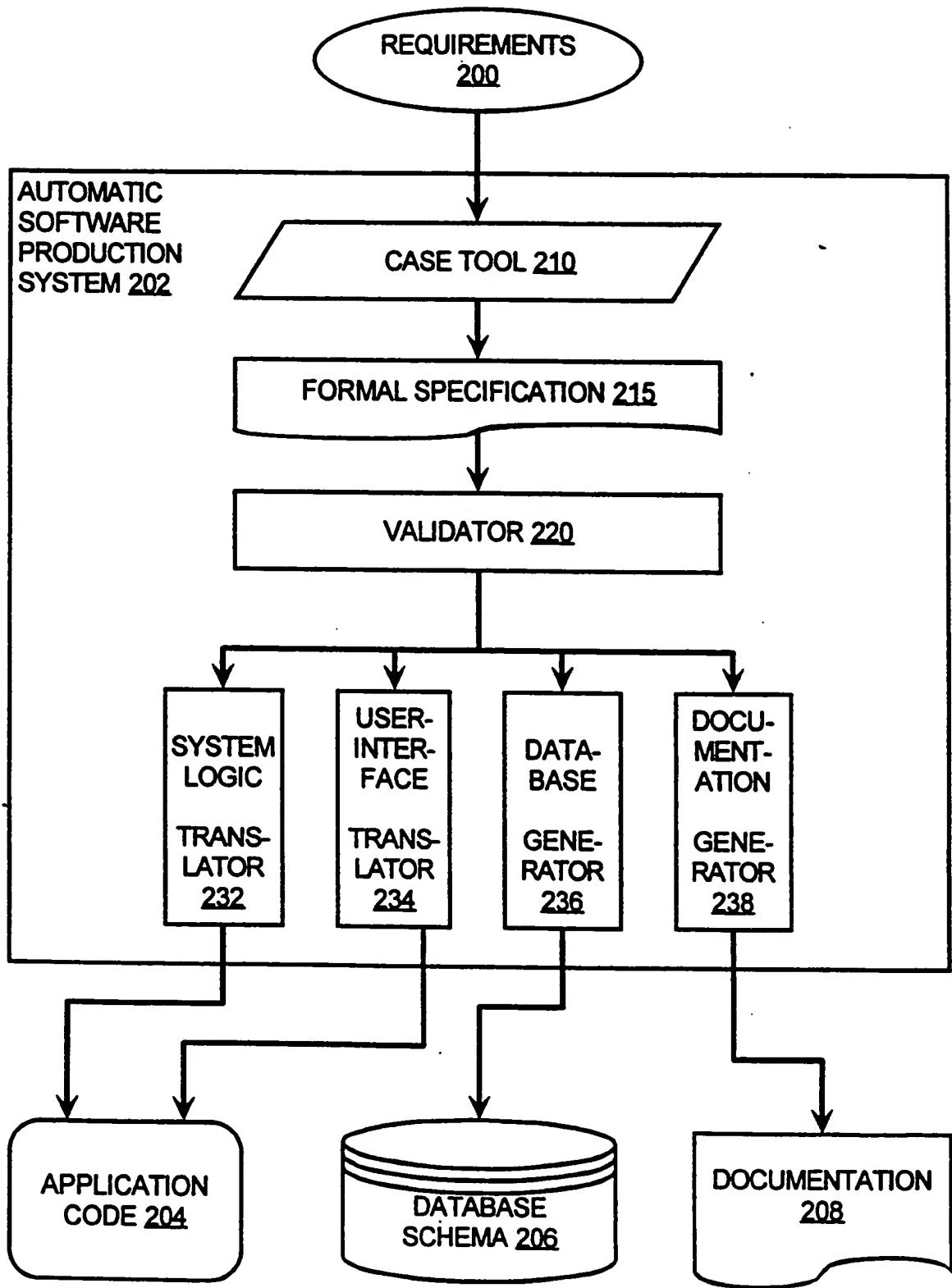


FIG. 2

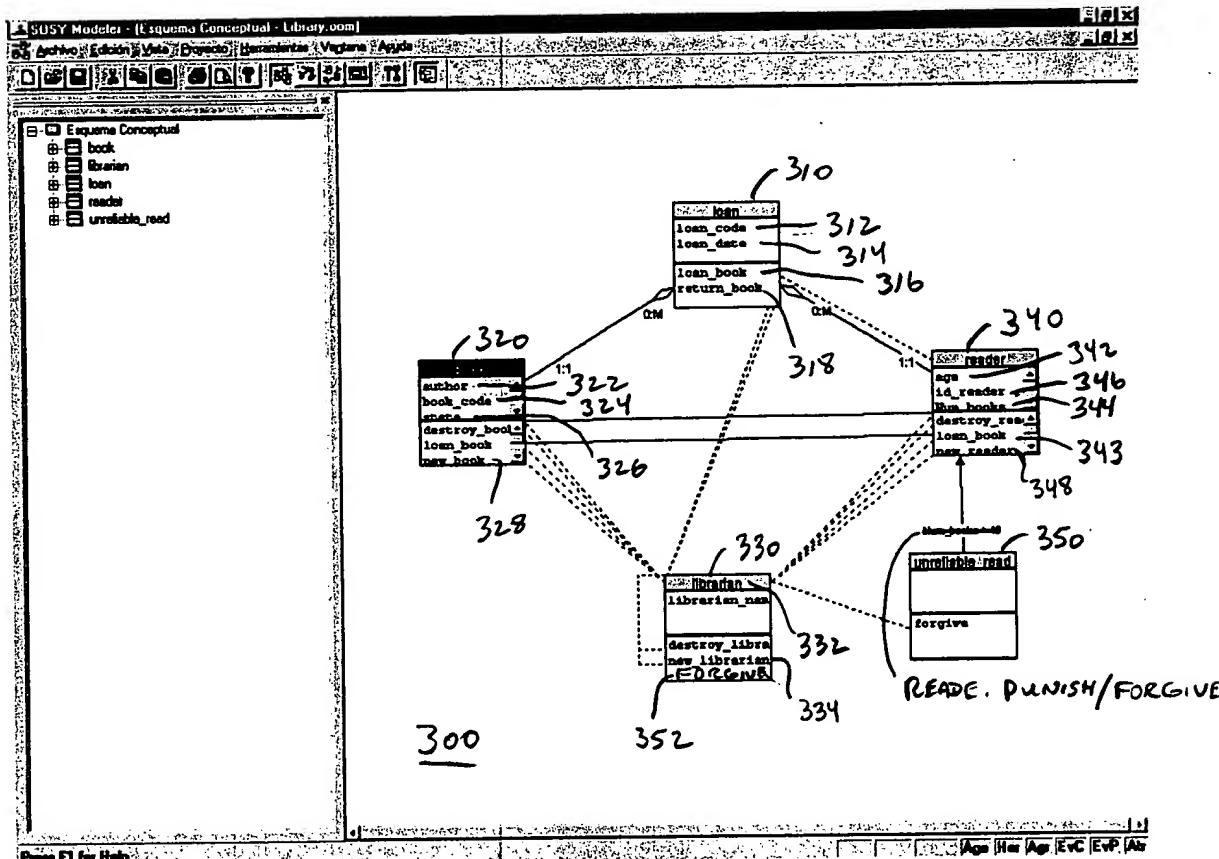


FIG. 3

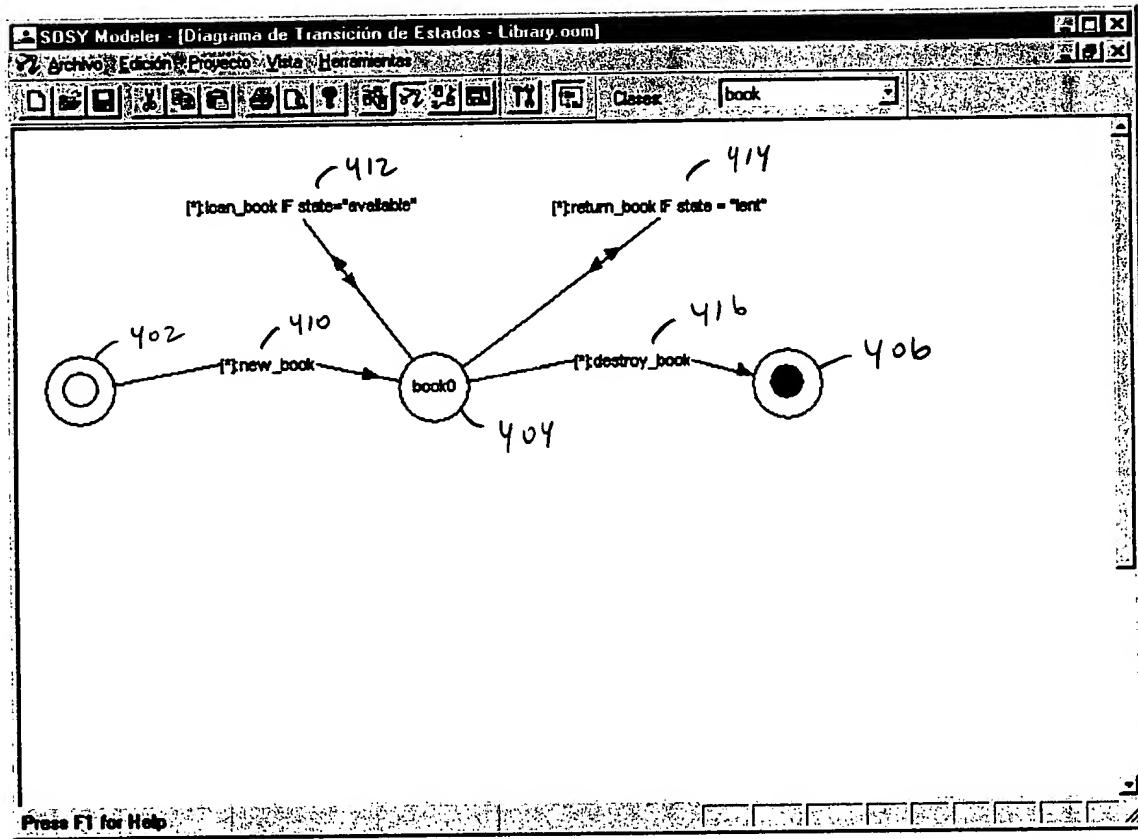


FIG. 4 A

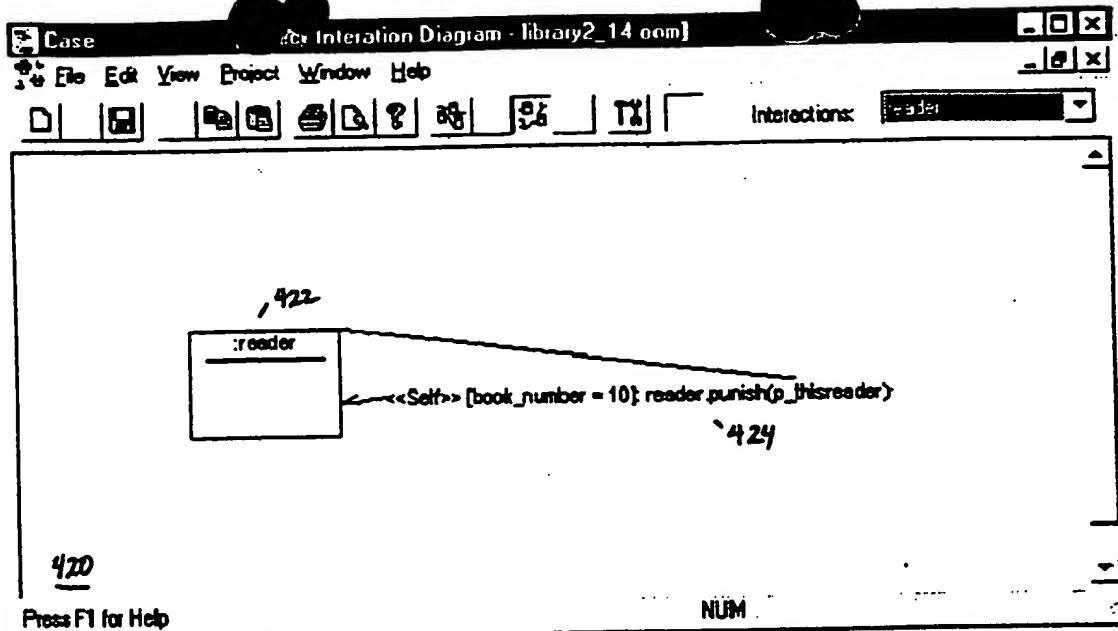


FIG. 48

Functional Model

Does: reader

Attribute: book\_number

Cancel

Event	Value	Effect	Condition
loan_book	1	+	
return_book	1	-	

Add

Body

Update

Category

Pure

State-independent

Discrete domain

Valuation Details

Event: loan\_book

Action type: Increment

Valuation conditions

Effect of the event:

1

FIG. 5

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES OF SYSTEM LOGIC TRANSLATORS WILL PERFORM

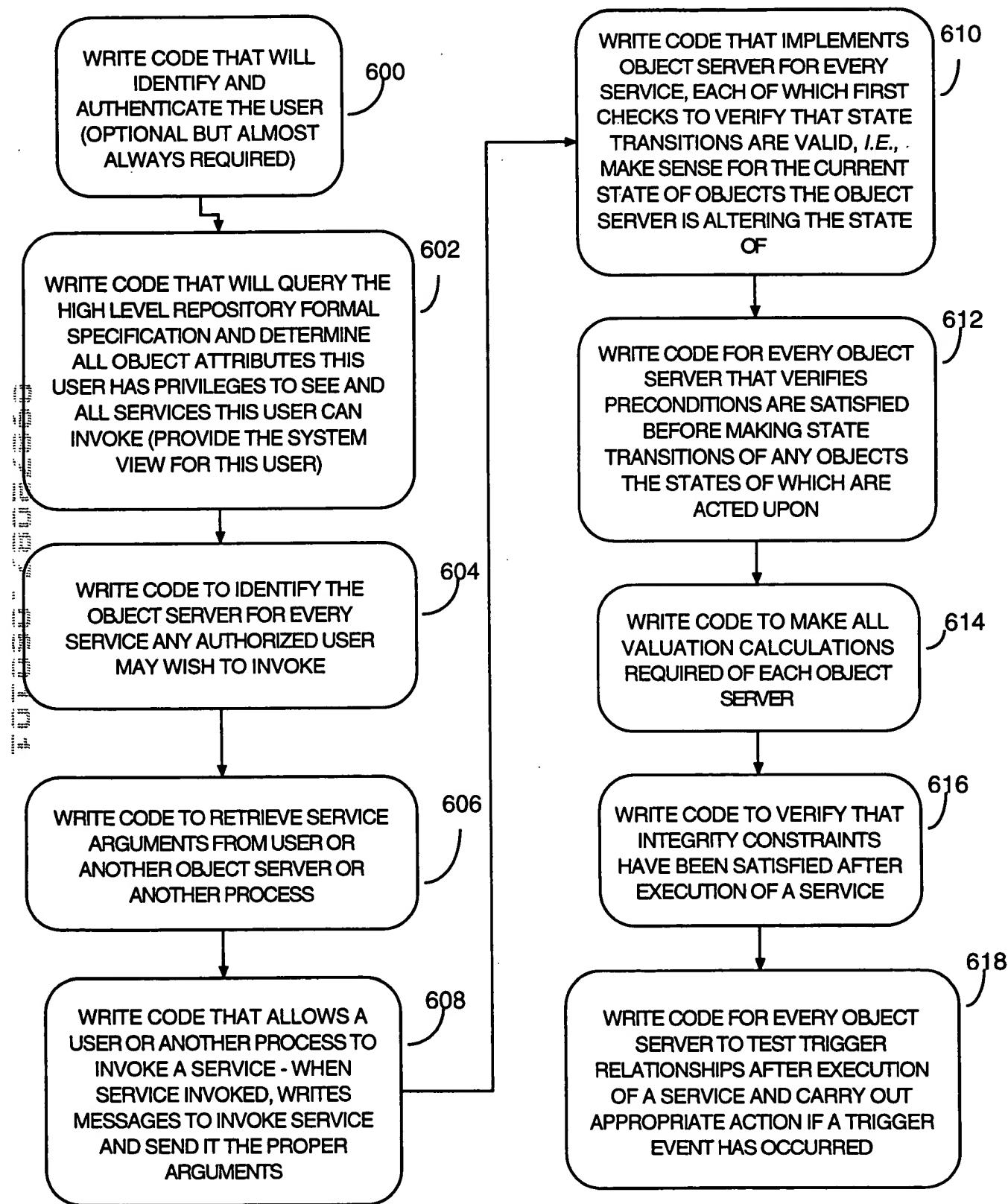


FIG. 6

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE USER INTERFACE  
TRANSLATOR SUBGENUS WILL PERFORM

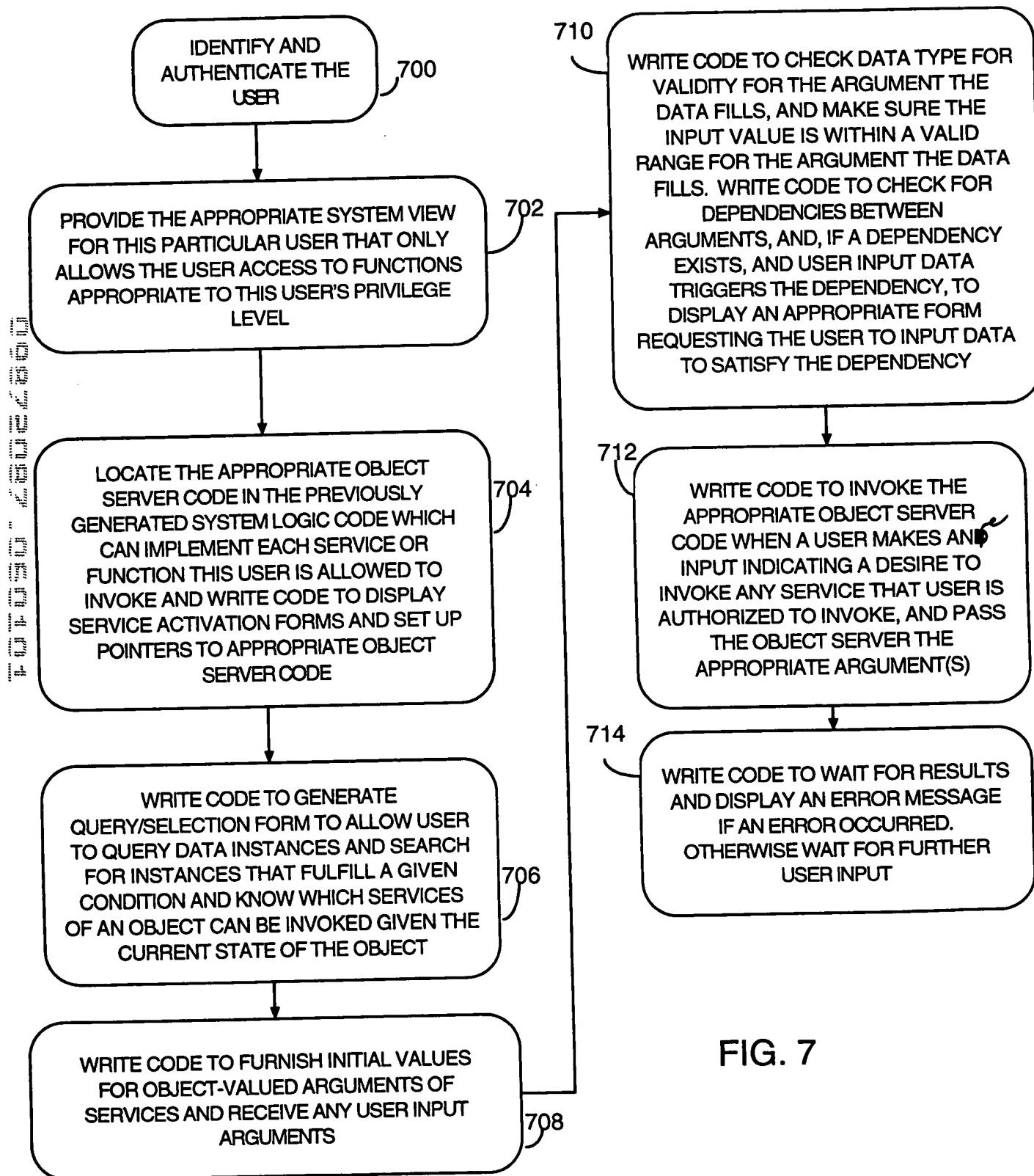


FIG. 7

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DATABASE GENERATOR  
TRANSLATOR SUBGENUS WILL PERFORM

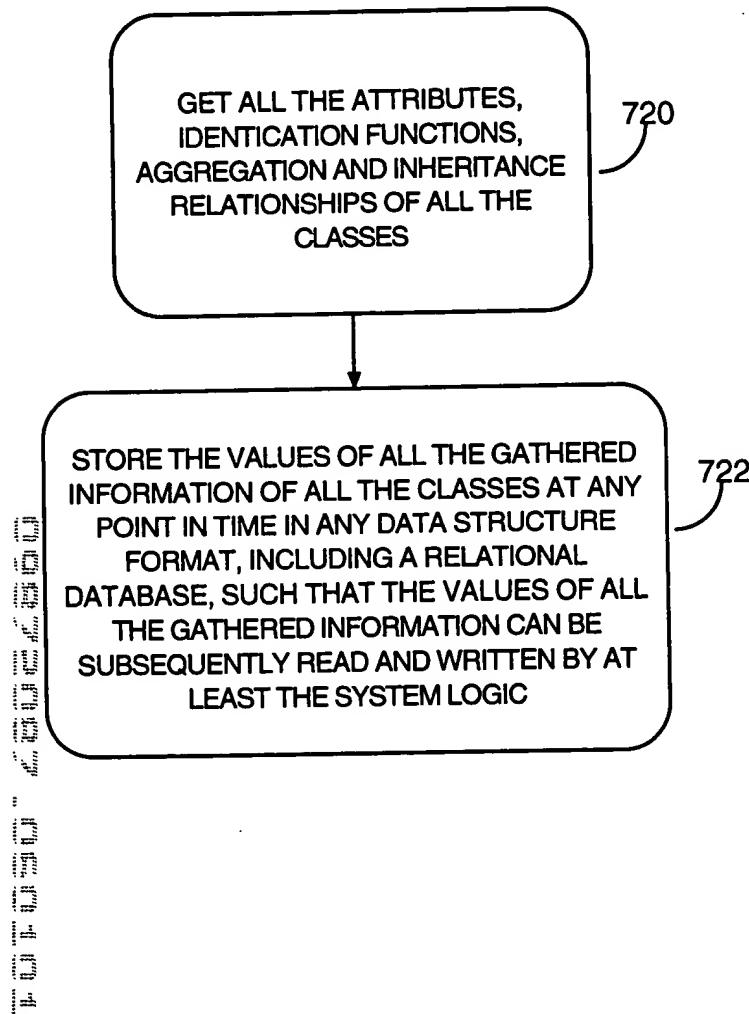
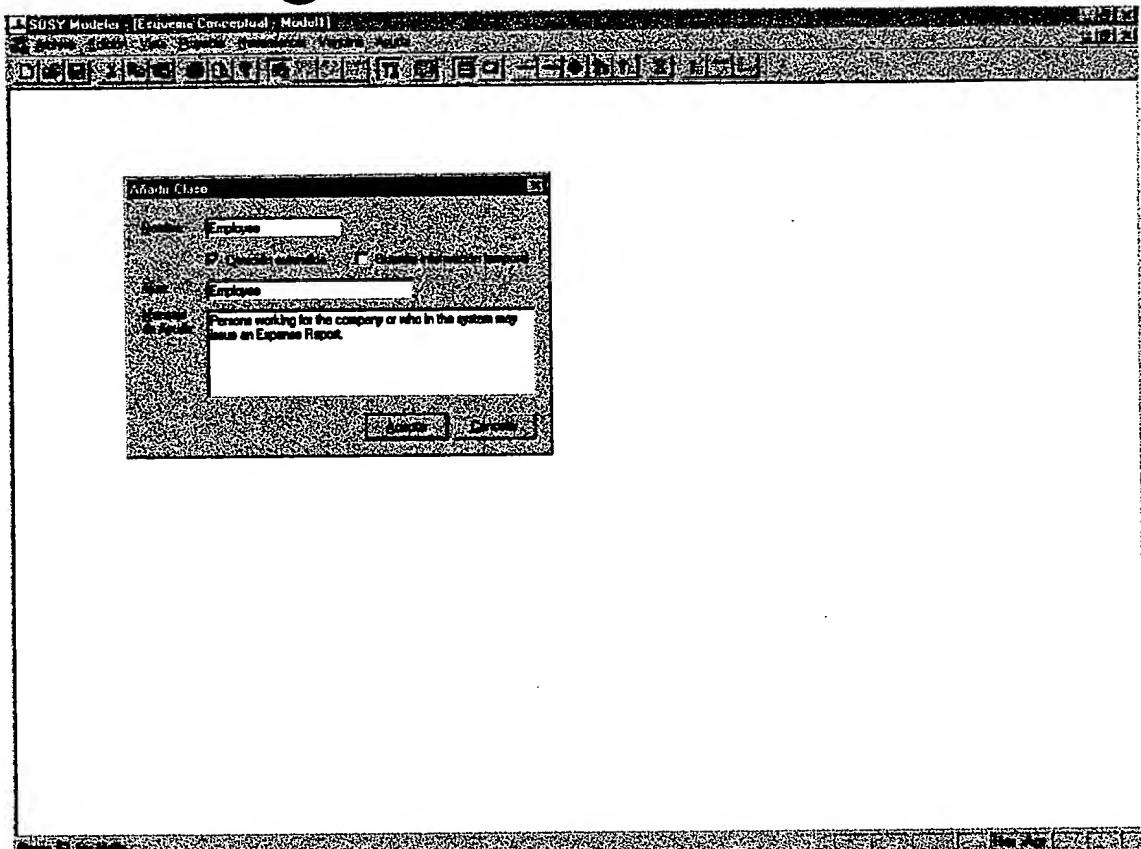
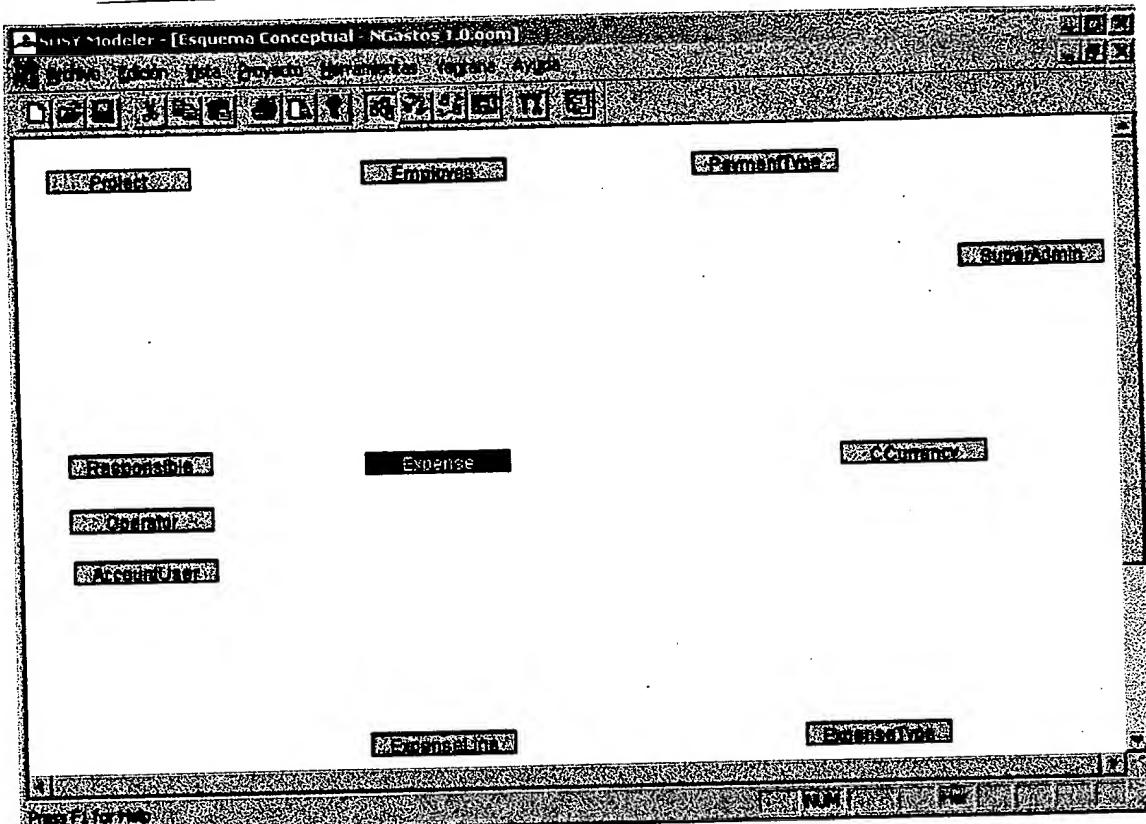


FIG. 8



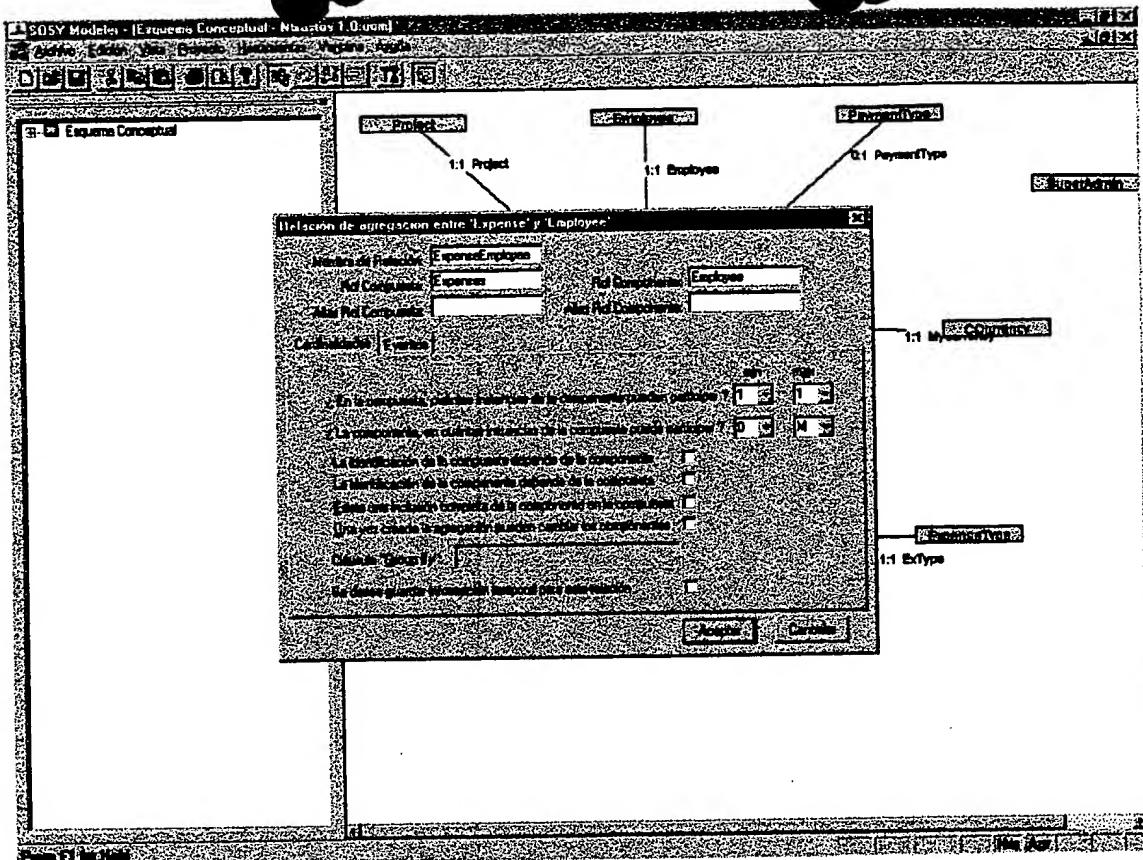
class creation dialog

FIG. 9A



DIALOG SHOWING ALL CLASSES NEEDED & CREATED  
IN EXPENSE MANAGEMENT SYSTEM

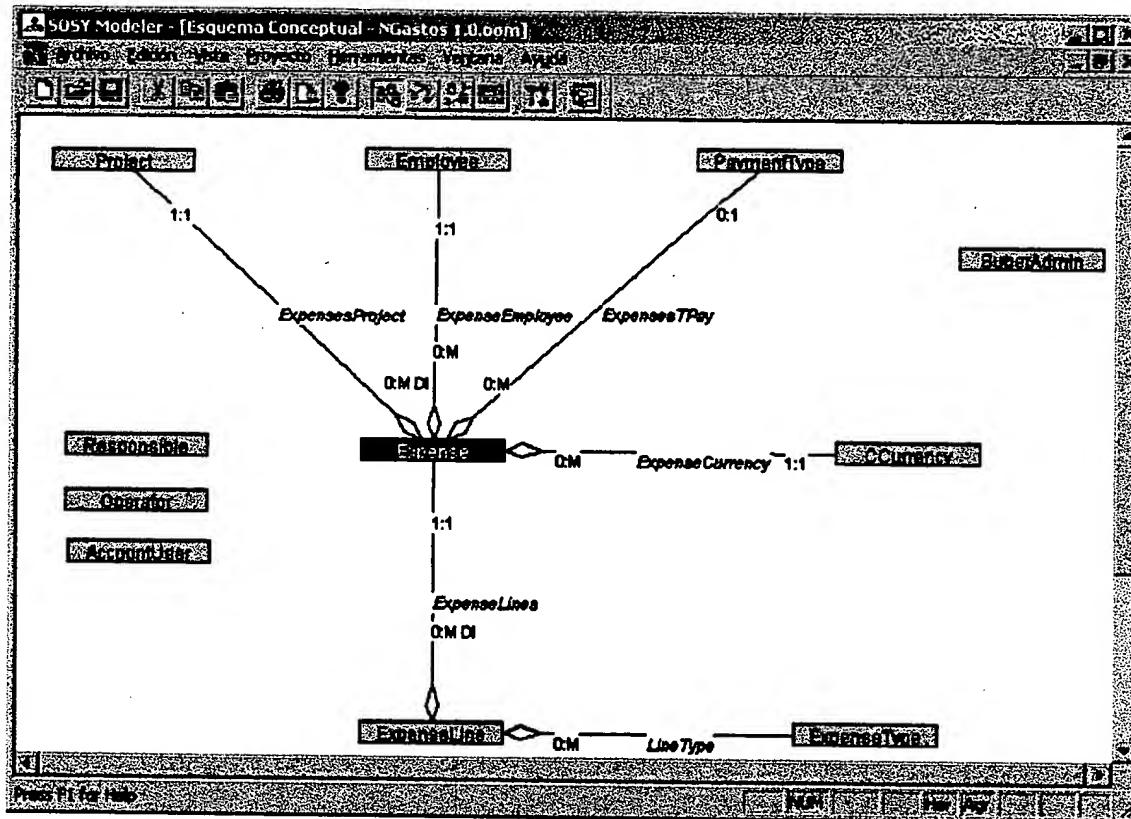
FIG. 9B



dialog to create and modify relationships between classes

FIG. 9C

figure shows relationships found with all their properties indicated.



GRAPHIC DIALOG TO CREATE  
RELATIONSHIPS BETWEEN CLASSES  
AND GRAPHICALLY SHOW THE  
RELATIONSHIPS SO CREATED

FIG. 10

Clase

Variables | Servicios | Desenvolviendo | Recursos | Consultas | Formularios | Documentos | Desarrolladores

Attributos

Nombre	Tipo de dato	Valor por defecto	Unidad	Formato	Validación	Propiedades	Notas
PresentDate	Constante	Date		today()	SI	No	
Status	Variable	Int		0	No	No	
Cause	Variable	String	255		SI	No	
AuthData	Variable	Date		NULL	No	SI	
AuthComments	Variable	String	255	NULL	No	SI	
PaymentDate	Variable	Date		NULL	No	SI	
PayComments	Variable	String	255		No	SI	
TotalExpenses	Derivado	Real					
TotalExpensesCur	Derivado	Real					
Advances	Variable	Real		0	SI	No	
AdvancesCur	Derivado	Real					
Exchange	Variable	Real			No	SI	
Balance	Derivado	Real					
BalanceCur	Derivado	Real					

Notas:  Puedo cambiar el tipo de dato

Información temporal

Nombre:

Apellido:

Clase:

Clase: Expense

(A)

Clase

Variables | Servicios | Desenvolviendo | Recursos | Consultas | Formularios | Documentos | Desarrolladores

Attributos

Nombre	Tipo de dato	Valor por defecto	Unidad	Formato	Validación	Propiedades	Notas
Balance	Derivado	Real					

Formularios de Desarrollo

Consulta:  TotalExpenses - Advances

Nombre:

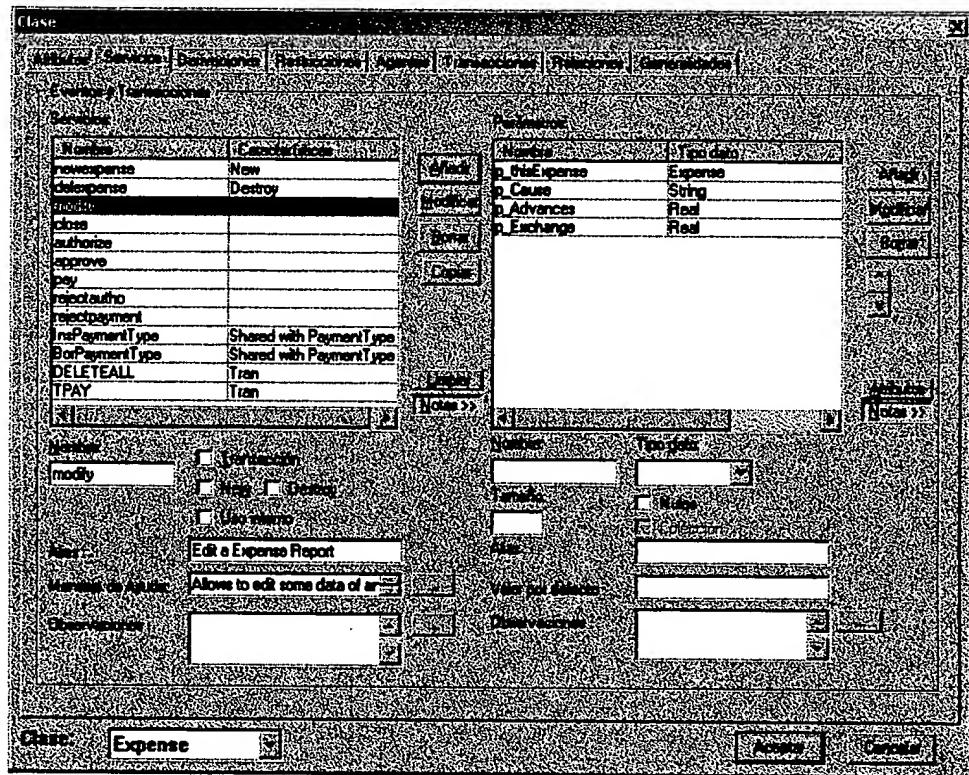
Apellido:

Clase:

Clase: Expense

(B)

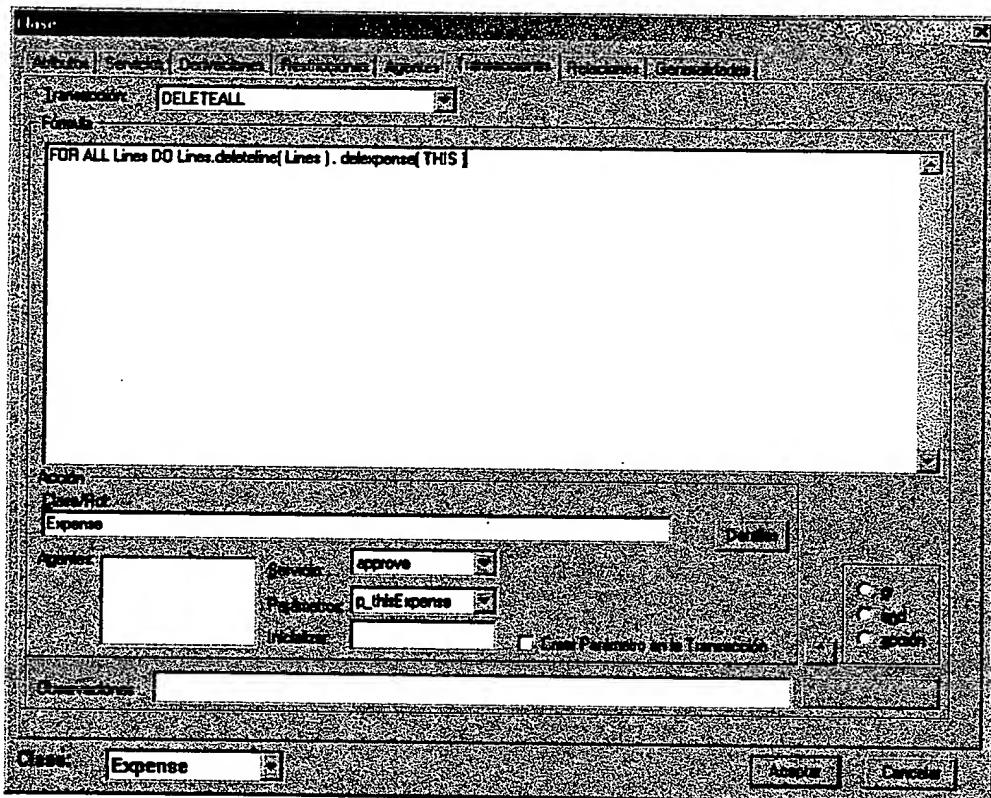
FIG. 11



## SERVICES OF CLASS "EXPENSE"

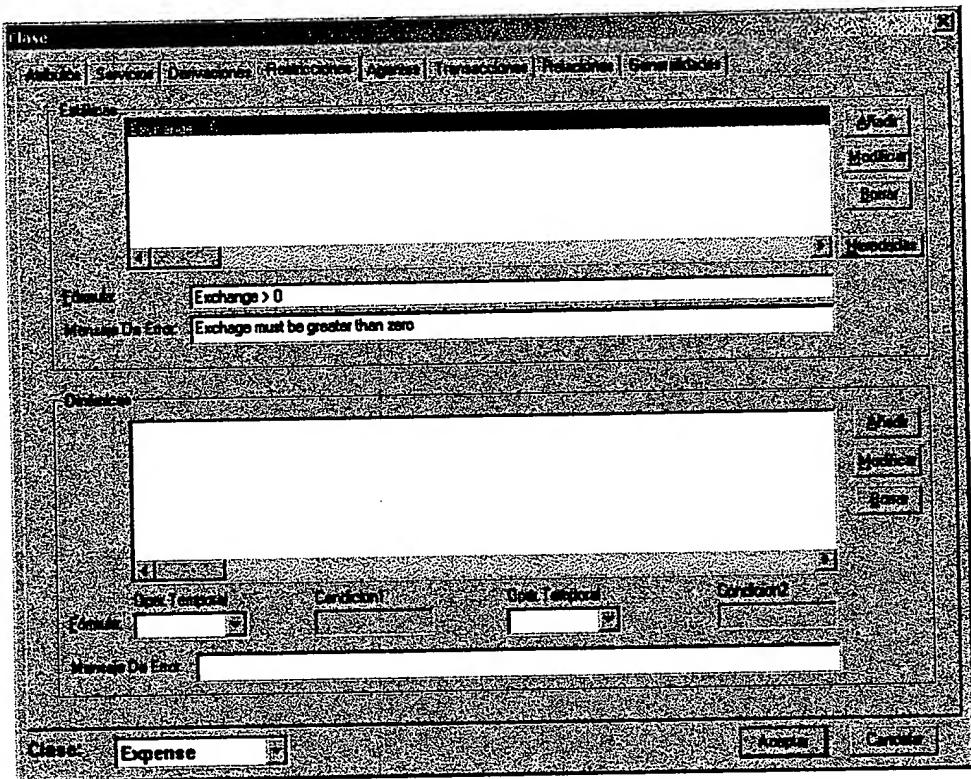
FIG. 12

Next figure shows the formula for the "DELETEALL" transaction:



DIALOG TO DEFINE FORMULA FOR "DELETEALL"  
TRANSACTION

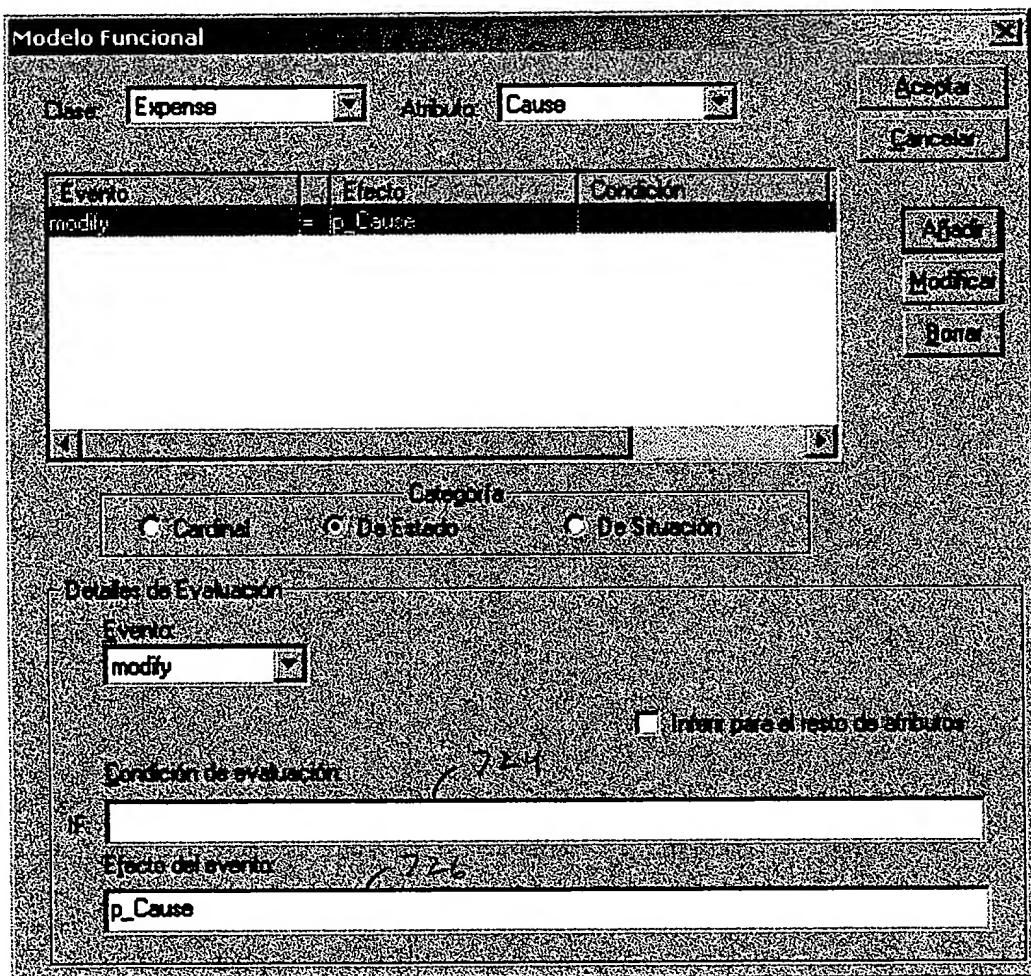
FIG. 13



INTEGRITY CONSTRAINTS OF EXPENSE CLASS

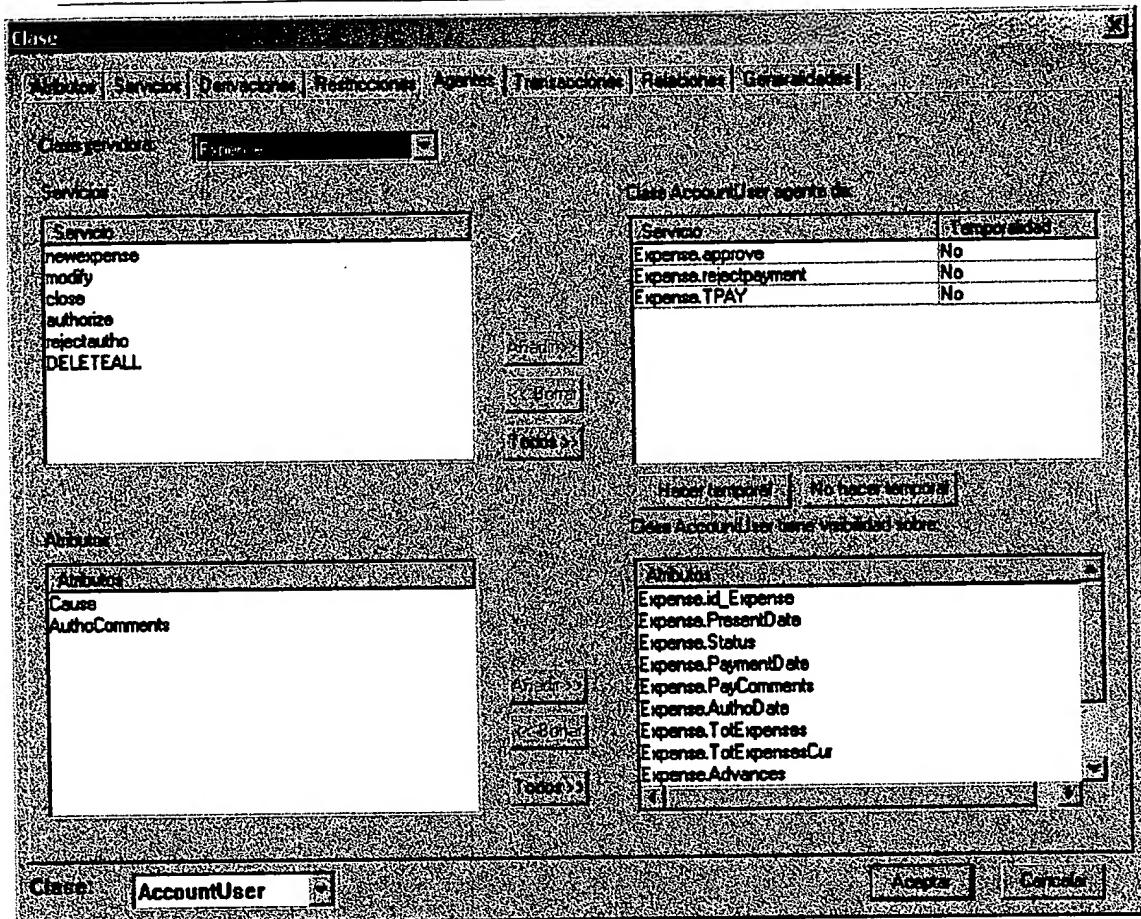
FIG. 14

The value of the attribute "Cause" will be loaded with the value of the argument "p\_Cause" of the event "modify" when "modify" was executed.



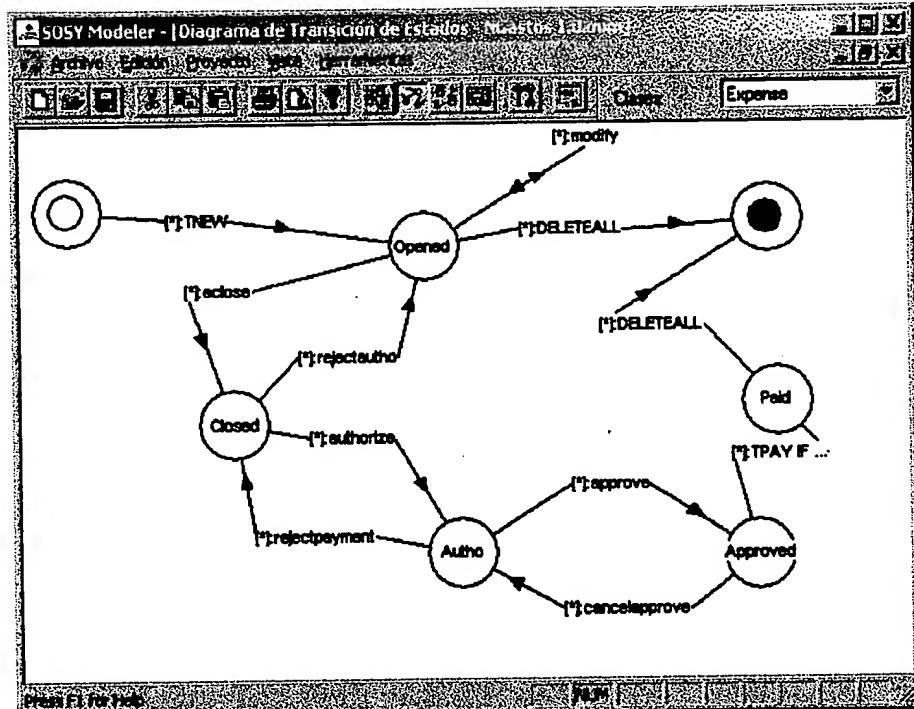
DIALOG BOX TO CREATE EVALUATION OF  
"CAUSE" ATTRIBUTE WITH THE  
"MODIFY" EVENT TO FORM PART OF  
FUNCTIONAL MODEL

FIG. 15



AGENT RELATIONSHIP DIALOG THAT CAN BE  
 USED TO SET WHICH SERVICES "ACCOUNT USE"  
 CAN ACCESS AND VISIBILITY OF CLASS  
 ATTRIBUTES FOR THIS USER

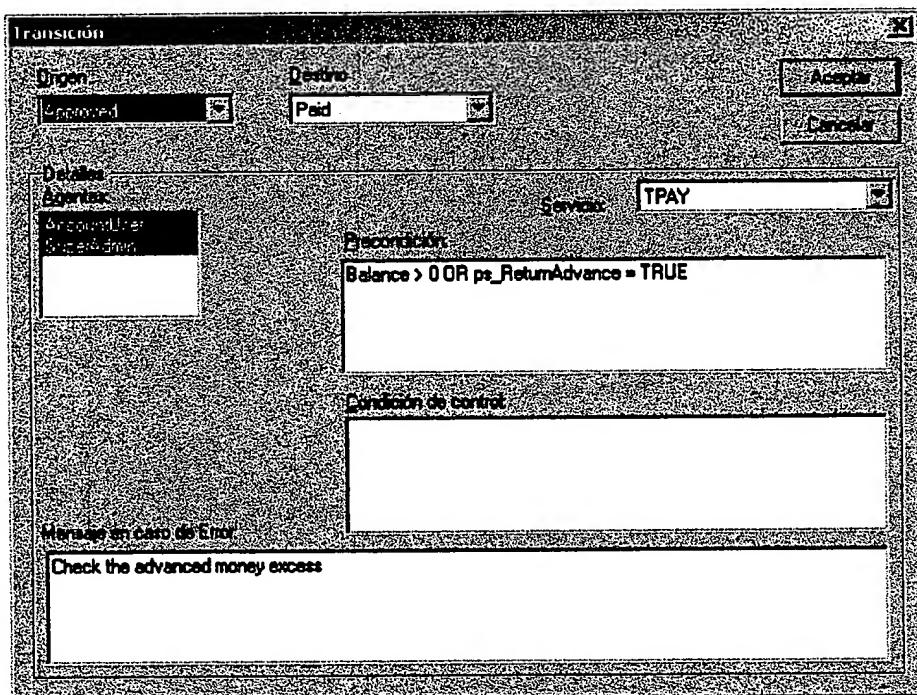
FIG. 16



STATE TRANSITION DIAGRAM FOR CLASS "EXPENSE"

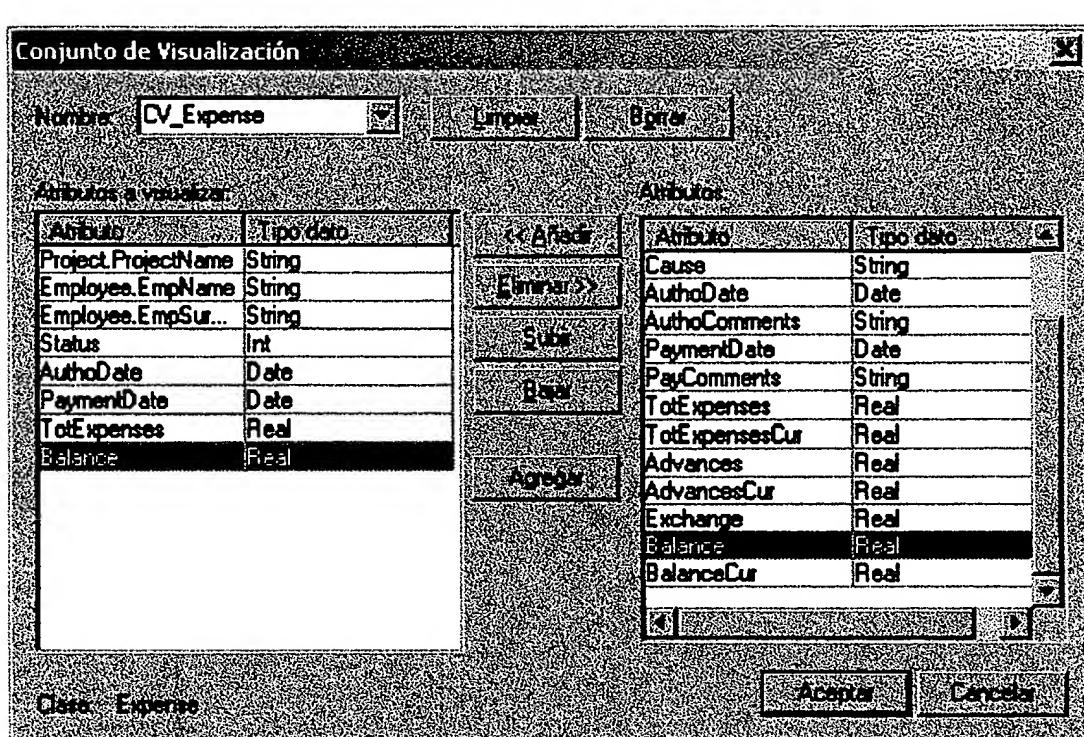
FIG. 17

According to last paragraph of Procedure, if the Advances are greater than total expenses, the system must force the confirmation of the account user. It is expressed as a precondition in the "TPAY" transaction. Next figure shows it.



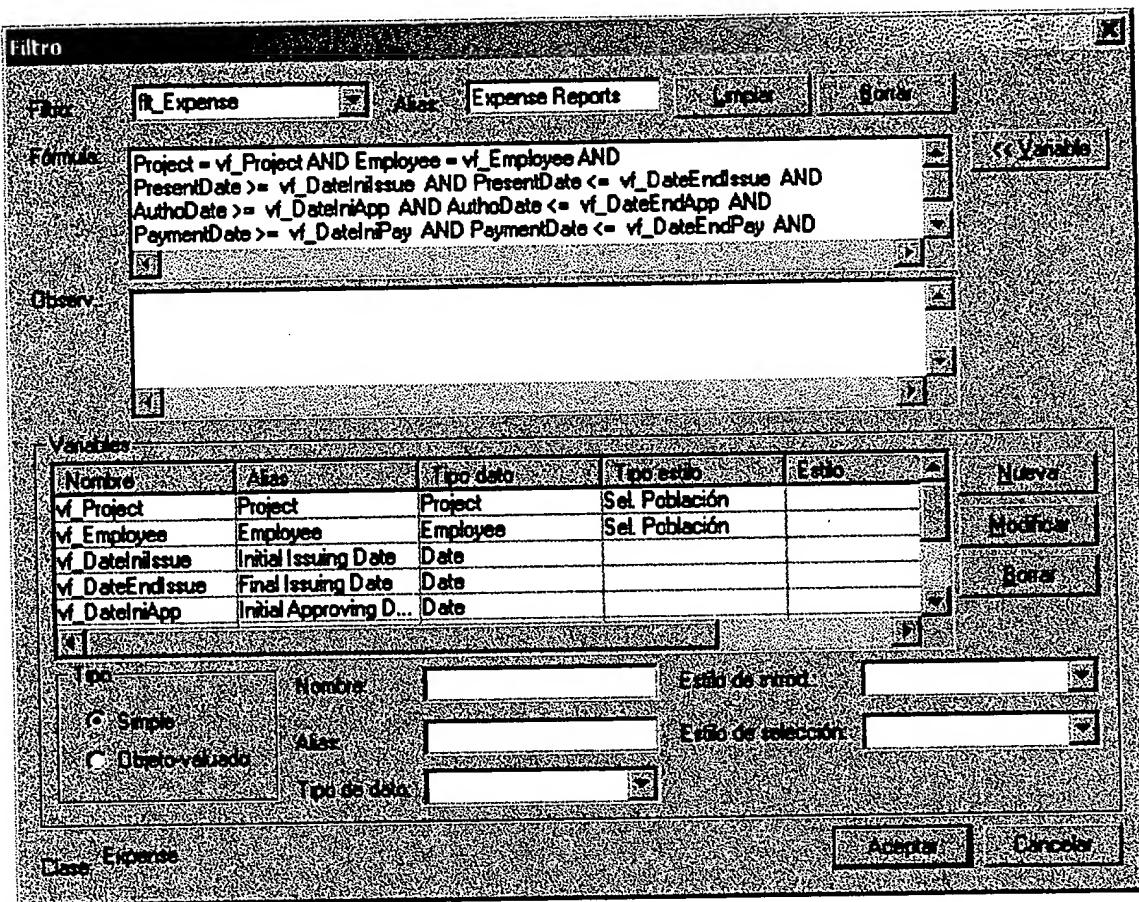
DIALOG BOX TO MODEL PRECONDITION

FIG. 18



DIALOG BOX USED BY SOSY MODELER  
 TO ESTABLISH A SET OF ATTRIBUTES  
 TO BE DISPLAYED FOR THE "EXPENSE" CLASS

FIG. 19



DIALOG BOX USED BY SOSY MODELER  
 TO ESTABLISH THE SEARCHING CRITERIA  
 FOR THE EXPENSE CLASS AND TO ESTABLISH  
 THE FILTER FORMULA <sup>TO USE</sup> AND THE VARIABLES  
 TO REQUEST THE USER TO ENTER

FIG. 20

## FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DOCUMENTATION GENERATOR TRANSLATOR SUBGENUS WILL PERFORM

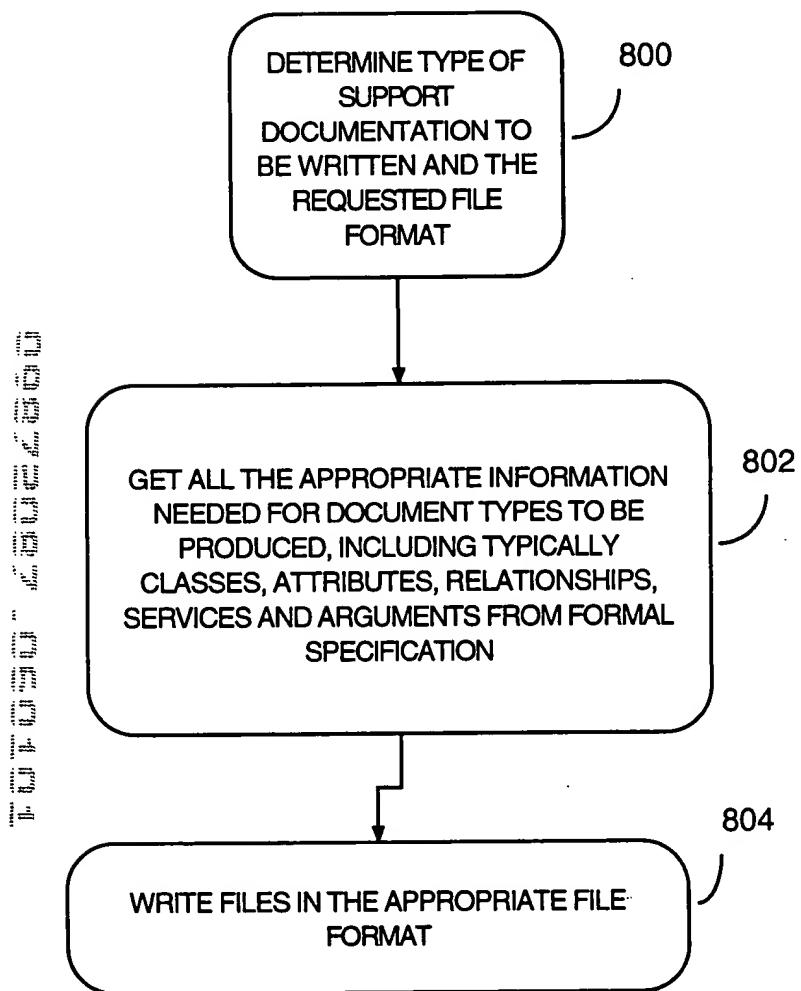


FIG. 21

卷之三